

R006-25

A 会場 : 9/26 AM2 (10:45-12:30)

11:30~11:45

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Alfvenic features at 500 km altitude for the cusp aurora

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Previous studies based on satellite observations have shown that Alfvenic features can be seen in the cusp, coexisting with the low-energy electron precipitation. It is not yet well understood how those Alfvenic features are related to the temporal characteristics of the cusp aurora, such as the increase in aurora brightness near the equatorward boundary of the main cusp region, and the poleward motion of the cusp aurora detached from the main cusp region. In this study, we examined data from the conjugate observation of cusp auroras obtained at a wavelength of 630 nm by a ground-based all-sky imager and the electric and magnetic fields obtained at the cusp at an altitude of about 500 km by the SWARM spacecraft. The result of the analysis shows that there is a common signature consistent with Alfven wave trapping at frequencies of 0.6 Hz to 1.2 Hz, and that the electric field power of the wave varies depending on the relative position inside the cusp or the time elapsed since the initial brightening. We discuss the reasons for this dependence.